

3. I have over 25 years of experience in this field, having worked for the Pennsylvania Department of Environmental Resources, now known as the Pennsylvania Department of Environmental Protection ("Department"), for five years before entering private practice for the balance of my career. When I was with the Department, I was responsible for reviewing plans for permitting wastewater systems, performing stream modeling studies to determine effluent limits and performing value engineering cost recommendations. As part of my stream modeling work, I conducted stream surveys to prepare the computer models to analyze the impacts of effluent discharges. I also participated in aquatic surveys and studies. In private practice, I have overseen a number of significant public sewer projects, including a \$20 million project for Borough of Ellwood City and a \$16 million project at the Borough of North East. I have developed stream-monitoring programs and has reviewed numerous aquatic stream surveys which analyzed aquatic impact. In addition, I have reviewed data from several dischargers to determine potential stream impacts in order to analyze required treatment facilities.

4. I was asked by the Millcreek Township Sewer Authority ("MTSA") and Millcreek Township ("Millcreek") to render opinions on several issues raised by the Plaintiffs in this case. A true and correct copy of the Expert Report I submitted in this case is included in the Appendix to Motion for Summary Judgment at App. 722- 733.

5. Based on my education and experience, I am qualified to testify regarding the need for the type of mandatory injunctive relief that Plaintiffs seek.

6. I have reviewed whether the mandatory injunction requested by Plaintiffs to order Defendants to assess and mitigate the environmental injuries caused by the Defendants' discharges is necessary. Based upon my review, I have concluded that, in my professional

opinion, such an assessment is not necessary because there is no evidence of any measurable harm that Defendants' discharges have caused to Walnut Creek.

7. My opinion is based on a number of factors. First, the overflows are not frequent, both in number of overflows and in duration of overflows. During the period of time covered by Plaintiffs' Complaint, the overflows at the Kearsarge pump station amount to approximately 0.2% of the total time during that period -- time during which Walnut Creek continues to flow. This indicates that the overflows are not frequent or chronic. Second, the overflows events occur during significant wet weather events or conditions. Thus, the overflow is significantly diluted by a factor of at least 5 to 1. Third, during the overflow events, Walnut Creek has a high stream flow. Both of these factors minimize the impact of any overflows. Fourth, the overall volume of the discharges is insignificant in relation to the flow of Walnut Creek. The volume of discharges is approximately 0.0004% of the total flow of Walnut Creek during the last 12+ years. This large difference in flows indicates that there is no significant potential for long-term water quality impacts due to the overflows. Fifth, sampling that has been performed of Walnut Creek do not indicate that there has been any water quality degradation due to the overflow. Sampling performed on Walnut Creek downstream of the overflows during dry weather produced results that indicate the overflows have caused no continuing problem. Lastly, I made personal observations of Walnut Creek, and based on my observations and experience, did not see any visible signs of water quality degradation.

8. I also was retained by MTSA and Millcreek to review the proposed design. First, I reviewed the situation confronting the MTSA and Millcreek and I have concluded that, in my professional opinion, the only alternative that MTSA and Millcreek could pursue to eliminate the overflows at the Kearsarge pump station would be an overflow retention facility.

9. I then reviewed the facility designed by Mr. Allender. I first reviewed the design standards relied upon by Mr. Allender in sizing the overflow retention basin; namely, Mr. Allender's use of the September 8-9, 2004 storm event, which was approximately a 50-year storm event. It is my professional opinion, based on my experience and the guidelines followed by the Department and the United States Environmental Protection Agency (which call for use of a 2-year, 24-hour storm event), that the 2.3 million gallon size of the overflow retention facility based on a 50-year storm event far exceeds industry standards and will be sufficient to eliminate the overflow at the Kearsarge pump station. Therefore, it is my further professional opinion that the design of the project will allow MTSA and Millcreek to remove the overflow at the Kearsarge pump station.

10. I was also asked by MTSA and Millcreek to review the operating procedures to be in place for the updated Kearsarge pump station and overflow retention facilities. Based upon my review, it is my professional opinion that the operating procedures should provide reliable operation of the Kearsarge pump station in order to maintain compliance with the Clean Water Act ("CWA").

11. In particular, I reviewed the following aspects of the project. First, when the flows into the pump station exceed the new pump capacity of 4,500 gpm, the water will automatically go to a wet well. Once in the wet well, when the water hits a certain level, the water will then be automatically pumped to the overflow retention facilities. Once the flows entering the station have decreased to below the 4,500 gpm maximum pumping rate, the water in the overflow retention facilities will automatically be returned to the station to be forwarded to the City of Erie system. The system also will have automatic alarms monitored by a Supervisory Control and Data Acquisition ("SCADA") system. A SCADA system is a computer system

which monitors critical functions and alerts a dispatcher if a problem is detected. The SCADA system operates 24 hours a day, 7 days a week. The new system will have alarms for wet well levels, flow set points, storage tanks levels, pump faults and other parameters critical to the operation of the system. Thus, if something goes wrong, someone from the MTSA will be contacted immediately so the problem can be addressed.

12. Equipped with these operating procedures and controls, it is my professional opinion that MTSA and Millcreek will be able to attain and maintain compliance with the CWA.



August E. Maas

Sworn to and subscribed before me
this 31st day of March, 2006.



Notary Public

